

NIT-304

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

T. OSABE et al

Serial No. 09/944,073

Group Art Unit: 2826

Filed: September 4, 2001

Examiner: T. Tran

For: SEMICONDUCTOR DEVICE

**RESPONSE**

Commissioner for Patents  
Mail Stop AF  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Final Rejection mailed April 3, 2003, please amend the above-identified application as follows. A Petition and fee for a three-month Extension of Time accompanies this response. A Request for Continued Examination (RCE) also accompanies this response.

**REMARKS**

**Priority**

Applicants appreciate the Examiner's acknowledgment of the claim for foreign priority and safe receipt of the certified priority document.

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**Drawings**

Approval is once again requested for a proposed drawing correction to Fig. 2 to modify the lead line for reference numeral J10. No new matter has been added. A separate letter to the Official Draftsperson is enclosed. This drawing correction was filed on March 6, 2003, but was not acknowledged by the Examiner.

**35 U.S.C. §103**

Claims 1-4 stand rejected under 35 U.S.C. §103(a) as being anticipated by Takeuchi et al in view of Nachumovsky. This rejection is traversed as follows.

Applicants strongly disagree with the Examiner's conclusion that the claims are unpatentable over Takeuchi et al in view of Nachumovsky. The Examiner's reasoning is as follows. The Examiner agrees that Takeuchi et al do not disclose memory cells having plural numbers of charge storage grains formed between a gate electrode and a channel region, as recited. In order to cure this deficiency, the Examiner relies upon Nachumovsky for disclosing memory cells having plural numbers of charge storage regions (26, 28) formed between a gate electrode 24 and a channel region (citing Fig.

2). Finally, the Examiner concludes that Takeuchi et al and Nachumovsky disclose all of the claimed subject matter except that the charge storage regions are charge storage grains. The Examiner concludes that it would have been obvious to one of ordinary skill in the art to form charge storage regions from charge storage grains for the reasons stated on page 4, lines 3-7 of the Office Action. Applicants respectfully disagree.

Applicants wish to point out to the Examiner that the charge storage grains of the present invention are components that are used to form charge storage regions. For example, as shown in Figs. 2 and 6 of the present application, the J12 and J13 represent charged storage regions comprising a plurality of charge storage grains or fine crystal grains J10 (see page 13, lines 23-28). It is improper for the Examiner to equate the charge storage grains of the present invention with the charge storage regions of Nachumovsky.

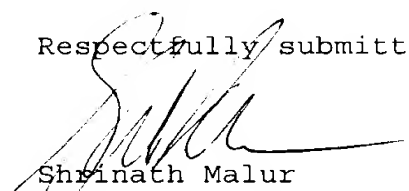
The charge storage regions 26 and 28 in Nachumovsky are formed on a single nitride layer 20 (see Figs. 1 and 2). There is no suggestion by Nachumovsky that these charge storage regions may comprise a plurality of individual parts of nitrite layer 20. Since Nachumovsky never disclose that the charge storage regions may be formed by charge storage

grains, it is submitted that the Examiner's rejection is based upon an impermissible use of hindsight reconstruction in which Applicants' claims are used as a template. As such, it is submitted that the pending claims patentably define the present invention over the cited art.

**CONCLUSION**

In view of the foregoing amendments and remarks, Applicants contend that the above-identified application is now in condition for allowance. Accordingly, reconsideration and reexamination are respectfully requested.

Respectfully submitted,



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